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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,783

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Chang-Sup Mun

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EXAMINER

DOUYON, LORNA M

ART UNIT

PAPER NUMBER

1751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/774,783	Applicant(s) MUN ET AL.	
	Examiner Lorna M. Douyon	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 9-21, 24 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9-21, 24 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. This action is responsive to the amendment filed on January 24, 2007.
2. Claims 1-5, 7, 9-21, 24 and 27 are pending.
3. The rejection of claim 27 under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicants' amendment.
4. Claims **15** and **27** are rejected under 35 U.S.C. 112, **first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation in claim 15, i.e., "wherein the alkaline solution consists essentially of an alkaline chloride solution" is nowhere supported in the specification and lacks literal basis in the specification as originally filed, see *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) *aff'd mem.* 738 F.2d 453 (Fed. Cir. 1984), and is therefore considered as new matter.

The limitation in claim 27, i.e., the "cleaning solution as claim in claim 15 (which comprises the corrosion inhibitor and an alkaline solution), further comprising an acid solution..." is nowhere supported in the specification and is therefore considered as new matter. In the specification on page 6, lines 10-12, it is recited that "the cleaning solution

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may further include an acid or an alkaline solution". There is nowhere recited that the acid and alkaline can be in the same cleaning solution.

5. The rejection of claims 15-18 and 24 under 35 U.S.C. 103(a) as being unpatentable Sato et al. (US Patent No. 5,849,467) is withdrawn in view of Applicants' amendment.

6. Claims 1-5, 7, 9, 12 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Quinlan (US Patent No. 4,670,186) for the reasons set forth in the previous office action, and which is repeated below.

Quinlan teaches an acid inhibitor composition comprising polyamine, alkynol and a surfactant (see abstract). In Example 24, Quinlan teaches a corrosion inhibiting formulation comprising 15% by weight propargyl alcohol (also known as 2-propyn-1-ol), 15% by weight dodecyl alcohol + 20 mols ethylene oxide (which meets the recited formula for the surfactant) and 10% by weight water (see Table under cols. 7-8). This formulation is employed to inhibit corrosion in a 5% hydrochloric acid solution and the inhibitor formulation was employed at 0.1% by volume (see col. 8, lines 62-68). A 0.1% by volume of the above inhibitor would still result in propargyl alcohol and surfactant concentration in amounts within those recited, i.e., 0.00015% by weight each of propargyl alcohol and above surfactant. Another alkynol used is butynediol (also known as 2-butyne-1,4-diol) (see col. 2, line 52). In addition, Quinlan teaches suitable surfactants which are oxyalkylated surfactants having alkylene oxide like ethylene oxide

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from 1 to 2000 (see col. 3, lines 43-57). Quinlan, however, fails to disclose a dodecyl alcohol + (5-15) mols ethylene oxide.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

7. Claims 1-2, 4, 7, 9, 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Otrhalek et al. (US Patent No. 4,032,466), hereinafter "Otrhalek" for the reasons set forth in the previous office action, and which is repeated below.

Otrhalek, in Example 1, teaches an acid cleaner comprising 47.77 parts (wt%) of water, 3 parts (wt%) oxalic acid, 12 parts (wt%) of alpha-alkyl (C₁₂-C₁₈) omega-hydroxy

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poly(oxyethylene) with the poly(oxyethylene) content averaging 9 moles, a nonionic surfactant of the ethoxylated monohydric alcohol type (which meets the recited formula for the surfactant), 25.2 parts(wt%) of 37 percent hydrochloric acid and 0.13 part (wt%) of propargyl alcohol (also known as 2-propyn-1-ol), see col. 8, line 64 to col. 9, line 12. In addition, Otrhalek teaches that the nonionic surfactant is present in an amount from about 7 to about 23 weight percent of the final composition (see col. 4, lines 13-16). Other suitable nonionic surfactants include fatty alcohols like dodecyl alcohol condensed with 5 to 30 moles of ethylene oxide (see col. 5, lines 53-61). Otrhalek, however, fails to specifically disclose the nonionic surfactant in amounts as those recited and wherein the nonionic surfactant is a dodecyl alcohol surfactant condensed with 5 to 15 moles of ethylene oxide.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition,

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a *prima facie* case of obviousness exists because the claimed ranges “overlap or lie inside ranges disclosed by the prior art”, see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected dodecyl alcohol condensed with 5 to 15 moles of ethylene oxide as the specific nonionic surfactant because this is one of the suitable nonionic surfactants taught by Otrhalek.

8. Claims 3 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Otrhalek as applied to the above claims, and further in view of Quinlan for the reasons set forth in the previous office action, and which is repeated below.

Otrhalek teaches the features as described above. In addition, Otrhalek teaches that in certain cases, such as where unpainted metals are being washed, it is important to include a corrosion inhibitor and any of the well-known corrosion inhibitors are suitable for the purpose (see col. 7, lines 43-48). Otrhalek, however, fails to disclose a corrosion inhibitor such as 2-butyne-1,4-diol, that is, in the recited formula, R₁ is OH.

Quinlan teaches the equivalency of propargyl alcohol with butynediol (i.e., 2-butyne-1,4-diol) as corrosion inhibitors in a similar composition (see col. 2, lines 50-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute propargyl alcohol with 2-butyne-1,4-diol because Otrhalek desires any well known corrosion inhibitor and Quinlan teaches the well-known 2-butyne-1,4-diol as corrosion inhibitor as well as its equivalency with propargyl alcohol.

9. Claims 1-5, 7, 9-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hu et al. (US Patent No. 5,817,252), hereinafter "Hu" for the reasons set forth in the previous office action, and which is repeated below.

Hu teaches a deicing and anti-icing composition for aircraft which comprises 20 wt% to 65 wt% water, 1 ppm to 0.5 wt% nonionic surfactant which can be alkoxylated derivatives of alcohols having the general formula $(C_nH_{(2n+1)}O-(C_2H_4O)_x-H$ where $n \geq 1$, $x = \text{moles of EO} \geq 1$, 1 ppm to 1 wt% pH control agents such as potassium hydroxide and sodium hydroxide (see col. 3, line 46 to col. 5, line 8), and may also contain 1 ppm to 1.0 % by weight anti-corrosion compounds, one of which is butyne-1,4 diol (see col. 6, lines 21-26). Hu, however, fails to specifically disclose a cleaning composition comprising water, the recited surfactant and corrosion inhibitor or a cleaning composition comprising a corrosion inhibitor like butyne-1,4 diol in amounts as those recited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a composition comprising water, alkoxylated nonionic surfactant, for example dodecyl alcohol with $\text{EO} \geq 1$, potassium or sodium hydroxide, butyne-1,4 diol in their optimum proportions because the teachings of Hu encompass these ingredients and proportions and wherein the combination of these ingredients apparently controls the diffusion rate of water into and throughout a thin film of the composition mixture, thereby retarding the onset and progression of freezing as taught by Hu in col. 6, lines 50-54.

10. Claims 15-18 and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Takashima (US 2004/0142835) for the reasons set forth in the previous office action, and which is repeated below. Please note that Takashima is still available as prior art because the foreign priority document does not provide full support for the added limitation in the present amended claim 15 (i.e., wherein the alkaline solution consists essentially of an alkaline chloride solution), hence Applicants cannot rely on the filing date of the recited Korean Application.

Sato teaches an aqueous cleaning solution to effect dissolution of a photoresist layer which consists essentially of (a) a mixture of water and a water-miscible organic solvent as an aqueous medium and (b) a water-soluble alkaline compound dissolved in the aqueous medium (see col. 2, lines 51-55). The water-soluble alkaline compound can be an inorganic compound such as ammonia water (which is ammonium hydroxide) (see col. 4, lines 9-17), and is present in the aqueous cleaning solution in the range from 0.05 to 20% by weight (see col. 4, lines 59-62). Though optional, an anti-corrosion agent can be added to the aqueous cleaning solution and suitable compounds are alkynol compounds wherein 2-butyne-1,4-diol is preferred (see col. 5, lines 5-12; 23-28). The anticorrosion agents can be contained in the aqueous cleaning solution in a concentration in the range from 0.01 to 10% by weight (see col. 5, lines 36-40). Sato, however, fails to disclose an alkaline chloride in the cleaning solution.

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Takashima teaches a washing liquid for a semiconductor substrate which comprises in addition to ammonium hydroxide, an ammonium chloride (an alkaline chloride), to stabilize the pH of the solution (see paragraph 0046 on page 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ammonium chloride into the composition of Sato because this will stabilize the pH of the solution as taught by Takashima.

11. Claims 1-5, 7, 9-11 and 19-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sato; or Sato in view of Takashima as applied to claims 15-18 and 24 above, and further in view of Chu (US Patent No. 6,379,875) for the reasons set forth in the previous office action, and which is repeated below.

Sato; or Sato in view of Takashima teach the features as described above. In addition, Sato teaches that a small amount of a surface active agent like nonionic surface active agents can be added to the composition to improve the wettability of the resist surface with the cleaning solution or to adjust the surface tension of the solution (see col. 5, lines 41-48). Sato; or Sato in view of Takashima, however, fails to disclose the recited surfactant in particular, $C_{12}H_{25}O(CH_2CH_2O)_jH$, wherein j is 5-15.

Chu, in an analogous art, teaches nonionic surfactants such as fatty alcohol ethoxylates with a saturated hydrocarbon chains having 8 to 24 carbon atoms and a degree of ethoxylation of 2 to 20, in an amount from about 0.1 to about 10% of the total weight of the composition (see col. 5, lines 4-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the fatty alcohol ethoxylates of Chu which has 8 to 24 carbon atoms and a degree of ethoxylation of 2 to 20, say for example, a C12 carbon atom with a degree of ethoxylation of 5-15, into the cleaning solution of Sato; or Sato in view of Takashima because Sato specifically desires nonionic surfactants in his cleaning solution and Chu teaches such surfactants.

Response to Arguments

12. Applicants' arguments filed January 24, 2007 have been fully considered but they are not persuasive.

With respect to the obviousness rejection based upon Quinlan, Applicants argue that although Quinlan describes the use of non-ionic surfactants such as dodecyl alcohol, condensed with 20 mols ethylene oxide, Quinlan still fails to describe a cleaning solution which includes a surfactant with the formula of $C_{12}H_{25}O(CH_2CH_2O)_JH$, wherein J is an integer ranging from 5 to 15. Applicants also argue that the above surfactant of Quinlan clearly does not fall within the claimed surfactant of claim 1 and Quinlan fails to provide sufficient motivation to one skilled in the art to provide the claimed surfactant in its composition because at the very least, Quinlan sets forth a voluminous list of possible surfactants which may be used without hinting or suggesting the desirability of using the specific surfactant recited in claim 1 (see columns 2-5 of Quinlan).

The Examiner respectfully disagrees with the above argument because, as already stated in the previous office action, in col. 3, lines 43-57, Quinlan teaches

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suitable surfactants which are oxyalkylated surfactants having alkylene oxide like ethylene oxide from 1 to 2000. Even though dodecyl alcohol + 20 mols ethylene oxide is exemplified, and not with 5-15 mols ethylene oxide, a reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982). The 5-15 ethylene oxide units of the present claims are inside the range of the ethylene oxide units of Quinlan. In addition, most of the nonionic surfactants shown in the examples are condensed with 10 mols or 15 mols of ethylene oxide, see for example, Example 17, 18, 20, 25 and 27 under cols 7-8. Absent unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I. Also, all disclosures of the prior art, including non-preferred embodiment, must be considered. See *In re Lamberti and Konort*, 192 USPQ 278 (CCPA 1967); *In re Snow* 176 USPQ 328(CCPA 9173). Nonpreferred embodiments can be indicative of obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399.

With respect to the obviousness rejection based upon Otrhalek, Applicants argue that: Otrhalek fails to provide sufficient motivation to one skilled in the art to provide the

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claimed surfactant in its composition for at least the reasons set forth below. Rather, Otrhalek describes that a broad range of ethoxylated monohydric alcohol surfactants may be included in its composition but Otrhalek fails to describe a cleaning solution which includes the specific surfactant of $C_{12}H_{25}O(CH_2CH_2O)_JH$, wherein J is an integer ranging from 5 to 15 as recited in claim 1. Additionally, Otrahlek also sets forth a laundry list of several different surfactants other than ethoxylated monohydric alcohol surfactants which may be used with its composition. In sum, Otrahlek describes that many different surfactants may be included in its compositions, without hinting or suggesting the desirability of using the specific surfactant recited in claim 1 as part of its compositions. (See Cols. 4-6 of Otrahlek).

The Examiner respectfully disagrees with the above argument because, as already stated in the previous office action, in col. 5, lines 53-61, Otrhalek teaches suitable nonionic surfactants which include fatty alcohols like dodecyl alcohol condensed with 5 to 30 moles of ethylene oxide (see col. 5, lines 53-61). The 5-15 ethylene oxide units of the present claims are inside the range of the ethylene oxide units of Otrhalek. As stated above, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art".

With respect to the obviousness rejection based upon Hu, Applicants argue that the Hu reference is related to deicing and anti-icing compositions for aircrafts is completely different from that of the present invention which is related to a cleaning solution such, as for example, a cleaning agent used in the process of forming a

semiconductor device, and therefore, the Hu reference cannot be used as a reference to reject this application.

The Examiner respectfully disagrees with the above argument because, first of all, the present claims only require a "cleaning solution", and does not recite any intended utility which is for use in a process of forming a semiconductor device as argued by Applicants. Secondly, even though Hu does not teach a semiconductor device use of his composition, the two different intended uses are not distinguishable in terms of the composition, see *In re Thuau*, 57 USPQ 324; *Ex parte Douros*, 163 USPQ 667; and *In re Craige*, 89 USPQ 393.

With respect to the obviousness rejection based upon Sato in view of Chu, Applicants argue that: although Sato mentions that certain non-ionic surface active agents may be used with its cleaning solution, none of these surfactants fall within the surfactant recited in claim 1. (See Col 5, lines 41-48 of Sato). Moreover, Sato fails to hint or suggest at the desirability of using the specific surfactant as part of a cleaning solution as essentially recited in claim 1. Additionally, Chu broadly states that several different types of surfactants may be used with its compositions, including fatty acids or fatty alcohol ethoxylates with saturated or unsaturated hydrocarbon chains having 8 to 24 carbon atoms and a degree of ethoxylation of 2 to 20. (See col. 5, lines 4-19 of Chu). However, the above fatty acids or fatty alcohol ethoxylates described in Chu are a very broad genus of surfactants and Chu fails to hint or suggest at the desirability of using the specific surfactant recited in the cleaning solution of claim 1.

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The Examiner respectfully disagrees with the above argument because Sato teaches in col. 5, lines 41-48 that a small amount of a surface active agent like nonionic surface active agents can be added to the composition to improve the wettability of the resist surface with the cleaning solution or to adjust the surface tension of the solution, and Chu, in an analogous art, teaches nonionic surfactants such as fatty alcohol ethoxylates with a saturated hydrocarbon chains having 8 to 24 carbon atoms and a degree of ethoxylation of 2 to 20, in an amount from about 0.1 to about 10% of the total weight of the composition (see col. 5, lines 4-23). Hence, as already stated in the previous office action, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the fatty alcohol ethoxylates of Chu which has 8 to 24 carbon atoms and a degree of ethoxylation of 2 to 20, say for example, a C12 carbon atom with a degree of ethoxylation of 5-15, into the cleaning solution of Sato because Sato specifically desires nonionic surfactants in his cleaning solution and Chu teaches such surfactants

Applicants also argue that the Quinlan, Otrhalek, Hu, Sato and Chu, references alone or in combination each fail to teach or suggest all of the features recited in claim 15.

The Examiner respectfully disagrees with the above argument because claim 15 is not rejected over the Quinlan, Otrhalek, nor Hu references. Please see paragraphs 13-16 of the previous office action, and paragraphs 6-9 above. The argument with respect to Sato in view of Chu is already discussed above.

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With respect to the obviousness rejection based upon Sato in view of Takashima, Applicants argue that Takashima does not qualify as prior art with respect to any of the pending claims because the effective filing date of Takashima is after the foreign priority date claimed under 35 U.S.C. 119 by the present application to Korean Patent Application No. 10-2003-0035345.

The Examiner respectfully disagrees with the above argument because as stated above, Takashima is still available as prior art because the foreign priority document does not provide full support for the added limitation in the present amended claim 15 (i.e., wherein the alkaline solution consists essentially of an alkaline chloride solution). Moreover, it is unclear how "the alkaline solution" would just "consists essentially of an alkaline chloride solution" when the chloride solution is only a salt? Hence, Applicants cannot rely on the filing date of the recited Korean Application.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

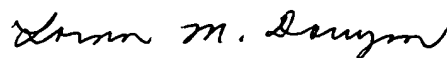
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lorna M. Douyon whose telephone number is 571-272-1313. The examiner can normally be reached on Mondays-Fridays 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lorna M. Douyon
Primary Examiner
Art Unit 1751